EDAN INSTRUMENTS, INC.

CE 0123

SONOTRAX Series

Ultrasonic Pocket Doppler

Service Manual

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EC Declaration of Conformity

Manufacturer: EDAN Instruments, Inc.

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European Representative:Shanghai International Holding Corp. GmbH (Europe)

Addr: Eiffestrasse 80 D-20537 Hamburg Germany

Product: Ultrasonic Pocket Doppler

Model: SONOTRAX Lite, SONOTRAX Basic, SONOTRAX Basic A, SONOTRAX Pro, SONOTRAX II, SONOTRAX II Pro

Classification (MDD, Annex IX): IIa

We herewith declare that the above mentioned product(s) meet the transposition into national law, the provisions of Council Directive 93/42/EEC of 14 June 1993 concerning medical devices - as amended by Directive 98/79/EC on in vitro diagnostic medical devices.

All supporting documentation is retained at the premises of the manufacturer.

DIRECTIVES

General Applicable Directives:

Medical Device Directive: COUNCIL DIRECTIVE 93/42/EEC of 14 June 1993 concerning medical devices (MDD 93/42/EEC).

Standards applied: EN ISO 9001, ISO13485, EN ISO14971, EN ISO10993-1, IEC 601-1, EN 60601-1-1, BS EN 60601-1-4, IEC 60601-1-2, EN 61157, EN 1041, EN 60417-2-2000, IEC/TR 60878-2003, EN 980, EN 55011, ISO 1000, YY 0111-93, EN 61266, EN ISO 780 , GB/T 14740, GB/T 15464

Notified Body: TÜV SÜD Product Service GmbH, Ridlerstr 65, D-80339 MÜnchen, Germany.

Identification number CE 0123

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Responsibility of the Manufacturer

EDAN only considers itself responsible for any effect on safety, reliability and performance of the equipment if:

Assembly operations, repairs are carried out by persons authorized by EDAN, and the device is used in accordance with the instructions for use.

⚠**WARNING**⚠: **This device is not intended for treatment. The intended use is for clinical use. If the FHR result is distrustful, please use other methods such as stethoscope to verify immediately.**

Using This Label Guide

This guide is designed to give key concepts on safety precautions.

⚠**WARNING**⚠

A **WARNING** label advises against certain actions or situations that could result in personal injury or death.

CAUTION

A **CAUTION** label advises against actions or situations that could damage equipment, produce inaccurate data, or invalidate a procedure.

NOTE: A **NOTE** provides useful information regarding a function or a procedure.

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Chapter 1 General Information

1.1 Warranty and Service

Standard Service

EDAN provides a one-year-warranty for the warranted products (accessories are included). The warranty period begins on the date the products are shipped to customers. If customer promptly notifies EDAN of customer's warranty claim hereunder, EDAN will either repair, adjust or replace (with new or exchange replacement parts) the EDAN's product. EDAN warrants that any service it provides to customers will be performed by trained individuals in a workmanlike manner.

Limitation of Warranty

Direct, indirect or final damage and delay caused by the following situations for which EDAN are not responsible may void the warranty:

- Groupware is dismounted, stretched or redebugged.
- Unauthorized modification or misuse.
- Damage caused by operating beyond the environmental specifications for the medical product.
- Change or remove original serial number label or Manufacturer symbol.
- Improper use.

Service Procedure

(1) Fill in **Service Claim Form (SCF)**.

Fill in the SCF with detailed information including: **Model Name**, **Serial Number (SN)** and **Problem Phenomena**.

EDAN should not have any obligation to take over the case without this information. The form can be downloaded at: http://www.edan.com.cn or obtained from EDAN's Service Department.

(2) Send EDAN the SCF and Select a Solution.

Once service department receives the fully filled SCF, EDAN's engineer will offer a solution in three working days. EDAN will follow out the case based on below two conditions:

Within Warranty:

There are two options:

i) After receiving the **Return Material Authorization (RAM)** form from EDAN service department, customer sends EDAN the defective parts and informs the shipment tracking number. Then we will dispatch new part(s) to your confirmed address with confirmed

shipping invoice.

ii) Customer signs the **Declaration Form** and sends it back by email or fax. This form is legally certificated to make sure the customer or end-user will return the defective parts to EDAN on time. We will, at this option, dispatch the replace one(s) with confirmed shipping invoice.

NOTE:

(1) Both Return Material Authorization Form and Declaration Form are offered by EDAN service department once the SCF is confirmed by service engineer.

(2) Customer is responsible for freight & insurance charges when the equipment is shipped to EDAN for service including custom charges. EDAN is responsible for the freight, insurance & custom charges from EDAN to customer.

Out of Warranty:

After receiving the RMA from service department, customer sends defective parts to EDAN in advance. We will analyze the problems and discuss with customer about either repairing or replacing the part(s). Once the maintenance fee is invoiced and paid, we will make sure to dispatch good part(s) to confirmed address.

NOTE: Customer is responsible for any freight & insurance charge for the returned product.

(3) Obtain RMA Form.

Before the shipment of the materials, customer must obtain a RMA form from our service department, in which the RMA number, description of returning parts and shipping instruction are included. The RMA number should be indicated on the outside of the shipping container.

NOTE: EDAN should not have any obligation to end-user or customer who returns the goods without the notification by EDAN's service department. The sender takes the whole responsibility of accounted fee.

(4) Send the Parts to EDAN.

Follow these recommended instructions:

- Disassemble the parts with anti-static facility. Do not touch the parts with naked hand.
- Pack the parts safely before returning.
- Put the RMA number on the parcel.

- Describe the returned parts. The total value on the invoice should be less than USD100, and note on the invoice as “sample, no commercial value”.
- Confirm the invoice with EDAN before shipment.
- Send back the parts after EDAN’s confirmation.

Contact Information

If you have any question about maintenance, technical specifications or malfunctions of devices, do not hesitate to contact us.

EDAN Instruments, Inc.

TEL: +86-755-26898321, 26899221

FAX: +86-755-26882223, 26898330

E-mail: support@edan.com.cn

1.2 Introduction

SONOTRAX Series Ultrasonic Pocket Doppler is an advanced obstetrical unit, which can meet routine examination requirements of obstetricians. They can also used for vascular monitoring (optional).

There are six different models available: SONOTRAX Lite, SONOTRAX Basic, SONOTRAX Basic A, SONOTRAX Pro, SONOTRAX II and SONOTRAX II Pro.

SONOTRAX Lite is for simple auscultation (intermittent listening). SONOTRAX Basic, SONOTRAX Basic A, SONOTRAX Pro, SONOTRAX II and SONOTRAX II Pro are not only used to listen in the fetal heart, they also display the fetal heart rate on a LCD screen.

1.2.1 Appearance

Take example for 2.0MHz waterproof probe.

Figure 1-1 Front Panel

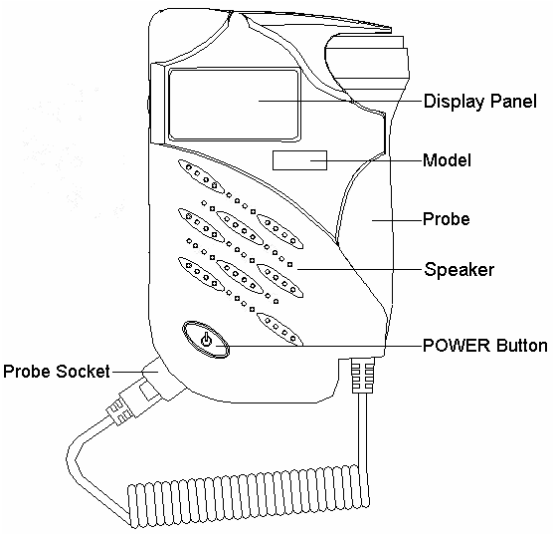


Figure 1-2 Rear Panel

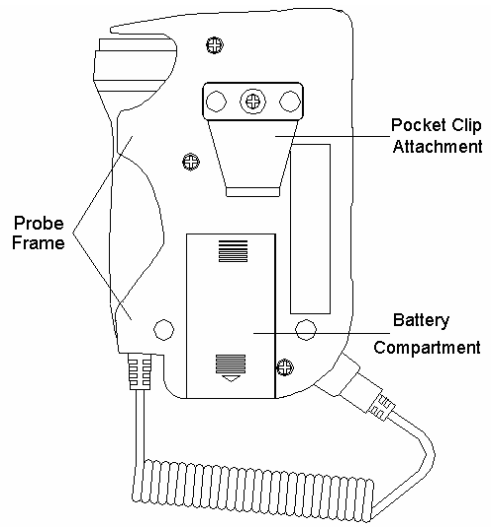


Figure 1-3 Top Panel

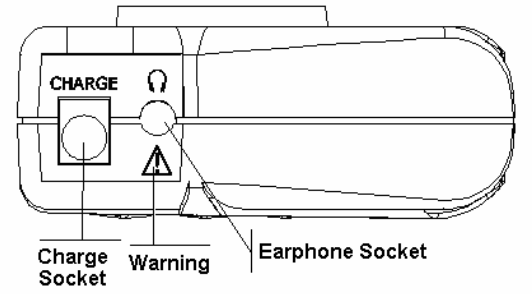
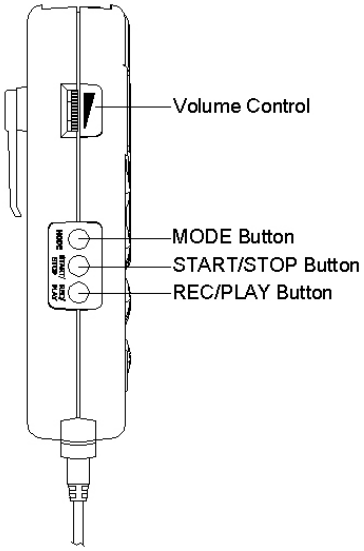


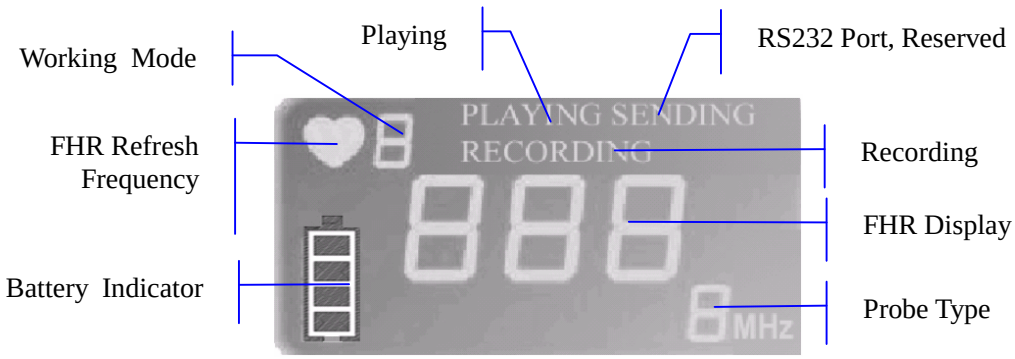
Figure 1-4 Left Panel



1.2.2 Display Panel

For SONOTRAX Basic, SONOTRAX Basic A, SONOTRAX Pro, SONOTRAX II and SONOTRAX II Pro Ultrasonic Pocket Doppler, while self-testing, the LCD display is as follows:

Figure 1-5 LCD display status while self-testing



1.2.3 Buttons

At most there are four push buttons (**Power**, **MODE**, **START/STOP** and **REC/PLAY**) and a volume control button on the SONOTRAX Series Ultrasonic Pocket Doppler. Their primary functions are as follows:

(1) Power Button 

Function: Switch on or off the Doppler.

(2) MODE Button 

(Only for SONOTRAX Basic / SONOTRAX Basic A/ SONOTRAX Pro/ SONOTRAX II/ SONOTRAX II Pro)

Function: Select the working mode.

(3) START/STOP Button 

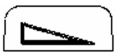
(Only for SONOTRAX Basic/ SONOTRAX Basic A/ SONOTRAX Pro/ SONOTRAX II/ SONOTRAX II Pro)

Function: Start/ stop monitoring (Mode 3)/ setting (Mode 4 and Mode 5).

(4) REC/PLAY 

(Only for SONOTRAX Pro/ SONOTRAX II Pro)

Function: Start/ stop recording or playing.

(5) Volume Control Indicator 

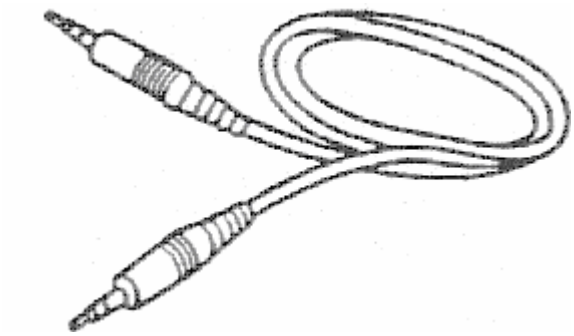
Function: Adjust volume. Rotate the volume gear clockwise to turn up the volume, while rotate it anti-clockwise to turn down the volume.

1.2.4 Sockets

The two sockets are located on the top panel of the Doppler.

(1) Earphone socket  **:** the earphone or line-in cable connects to the Doppler via this socket.

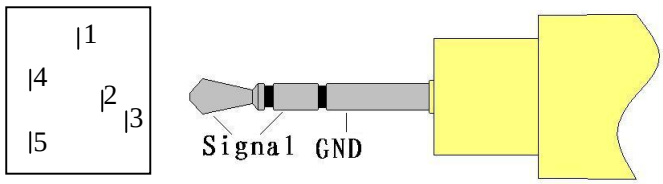
Figure 1-6 Line-in Cable

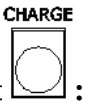


 : Attention. Refer to the accompanying documents.

Signal Interface

Pin	
1	GND
2	Signal
3	Signal
4	Signal
5	Signal



(2) Charge socket 

: the special lithium polymer battery charger connects to the Doppler via this socket. **(For SONOTRAX II and SONOTRAX II Pro only)**

1.3 Technical Specifications

1.3.1 Type of Instrument

Mode: SONOTRAX Lite / SONOTRAX Basic / SONOTRAX Basic A / SONOTRAX Pro / SONOTRAX II / SONOTRAX II Pro

Monitor Type: This product belongs to type B portable ordinary device classified by medical electric equipment safety standard.

This product is a kind of ordinary equipment without ability of preventing liquids from entering.

1.3.2 Power Supply

Voltage: D.C. 9V (Battery Supplied)

Battery Type Recommended:

SONOTRAX Lite/ Basic/ Basic A/ Pro: 9 volt DC alkaline battery.

IEC Type No. 6LR61or equivalent.

SONOTRAX II/II Pro: EDAN supplied Lithium-ion Polymer Battery.

1.3.3 Normal Operating Environment

Working: Temperature: +5°C ~ +40°C
Humidity: ≤80%
Atmospheric Pressure: 860hPa ~ 1060hPa

Transport and Storage: Temperature: -10°C ~ + 55°C
Humidity: ≤93%
Atmospheric Pressure: 860hPa ~1060hPa

1.3.4 Physical Character

Size: 32 (Depth) x 85 (Width) x 138 (Height) mm

Weight: 290±5g (including one battery)

1.3.5 LCD Display

Display: 45*25mm LCD display

FHR Performance:

FHR Measuring Range: 50 ~ 210 bpm (bpm: beat per minute)

Resolution: 1bpm

Accuracy: ±3bpm

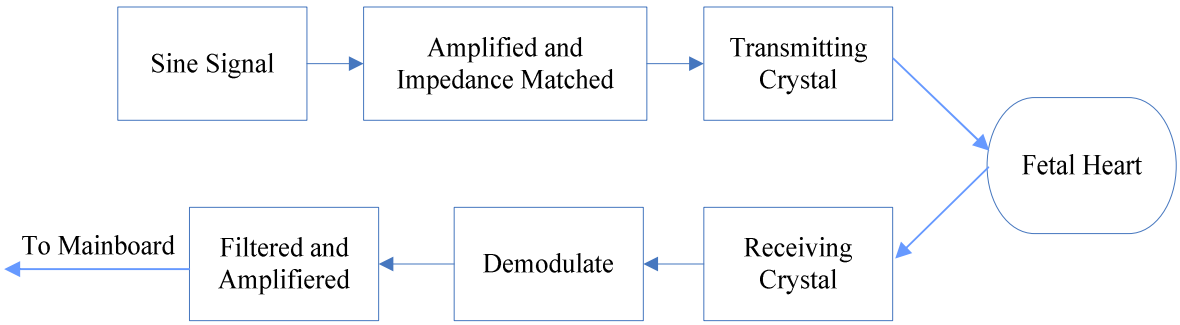
1.3.6 Specification of Probes

Nominal Frequency	2.0MHz Waterproof Probe	2.0MHz
	3.0MHz Waterproof Probe	3.0MHz
	4.0MHz Waterproof Vascular Probe	4.0MHz
	8.0MHz Waterproof Vascular Probe	8.0MHz
Working Frequency	2.0MHz Waterproof Probe	2.0MHz±10%
	3.0MHz Waterproof Probe	3.0MHz±10%
	4.0MHz Waterproof Vascular Probe	4.0MHz±10%
	8.0MHz Waterproof Vascular Probe	8.0MHz±10%
P_- < 1MPa		
I_{ob} < 10 mW/cm^2		
Ispta < 100mW/cm^2		
Working Mode	Continuous wave Doppler	
Effective Radiating Area of Transducer	2.0MHz Waterproof Probe	245mm^2±15%
	3.0MHz Waterproof Probe	245mm^2±15%
	4.0MHz Waterproof Vascular Probe	32mm^2±15%
	8.0MHz Waterproof Vascular Probe	14mm^2±15%

Chapter 2 Principle

2.1 Principle of Probe

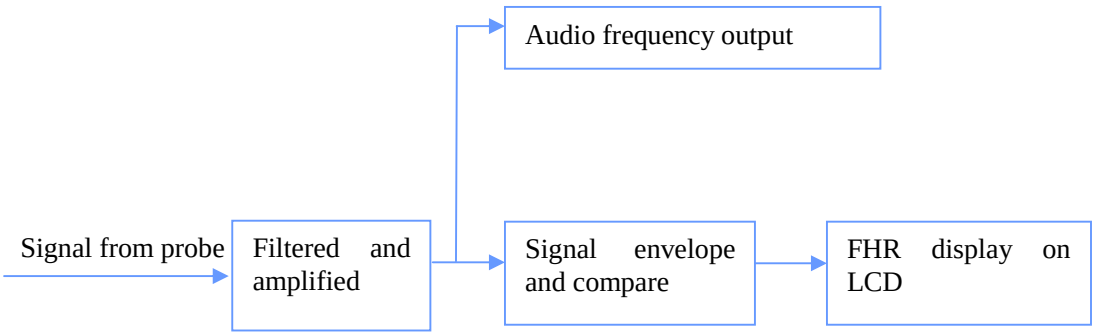
The sine wave signal generated by an oscillator is amplified and matched in impedance by FEFT and transformer, then be sent to the transmitting crystal of probe. The ultrasound emitted from the crystal reflects when meeting an obstacle. The receiving crystal receives the echo signal, after a process of demodulating, filtering and amplifying, this signal can be used by the mainboard.



2.2 Principle of the Doppler

Signal framework of SONOTRAX Lite:

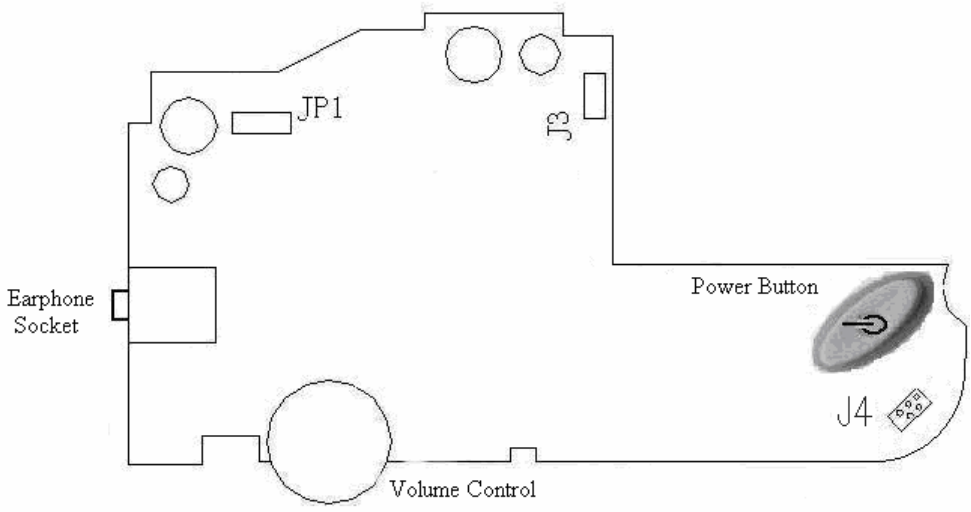
Signal framework of SONOTRAX Basic / SONOTRAX Basic A /SONOTRAX Pro / SONOTRAX II/ SONOTRAX II Pro:



2.3 Introduction of PCBs

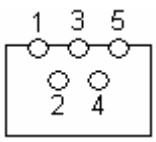
2.3.1 PCB of SONOTRAX Lite

Figure 2-1 PCB Outline of SONOTRAX Lite



J3: socket for connecting with battery

J4: socket for probe mini USB



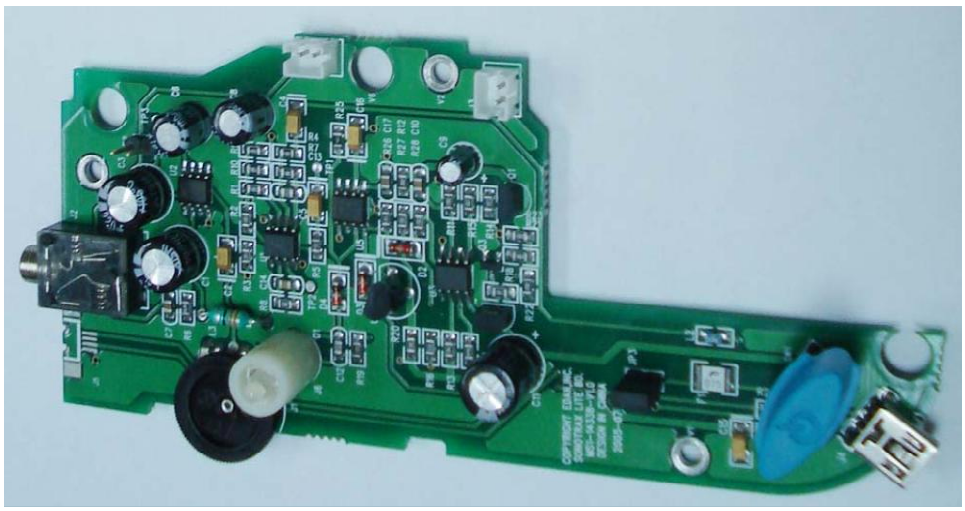
1: VCC

2: Signal

3, 4, 5: Probe identifying code.

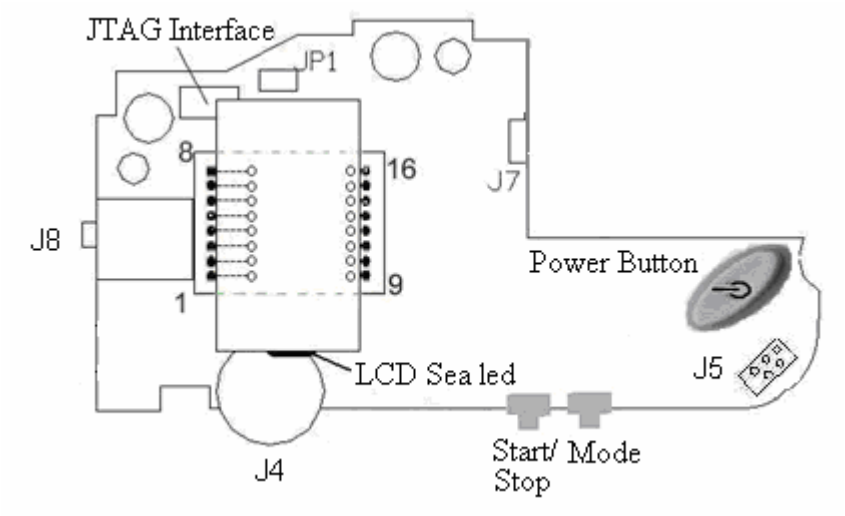
JP1: socket for speaker

Figure 2-2 PCB of SONOTRAX Lite



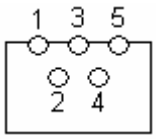
2.3.2 PCB of SONOTRAX Basic

Figure 2-3 PCB Outline of SONOTRAX Basic



J4: Volume Control.

J5: socket for probe mini USB.

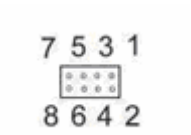


1: VCC
2: Signal
3, 4, 5: Probe identifying code.

J7: socket for connecting with battery.

JP1: socket for speaker.

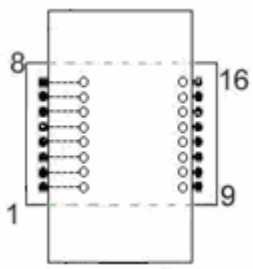
JTAG interface: MCU program solidify interface.



1:	TDO	2:	TDI
3:	TMS	4:	TCK
5:	GND	6:	RST
7:	3.3V	8:	NC

J8: earphone socket.

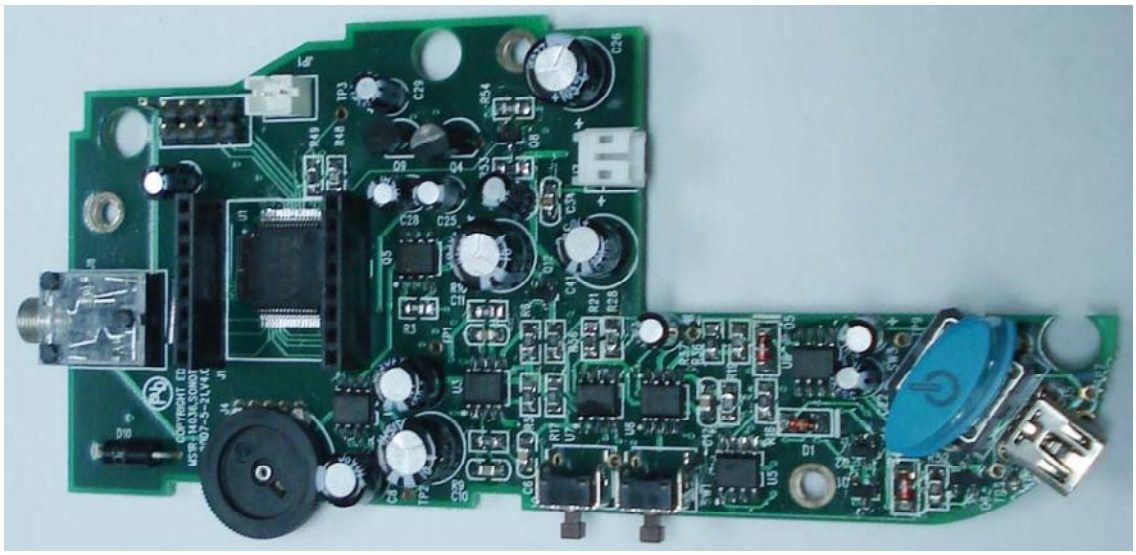
SONOTRAX Basic has a thin LCD with 16 pins:



1~16: Section Code Data

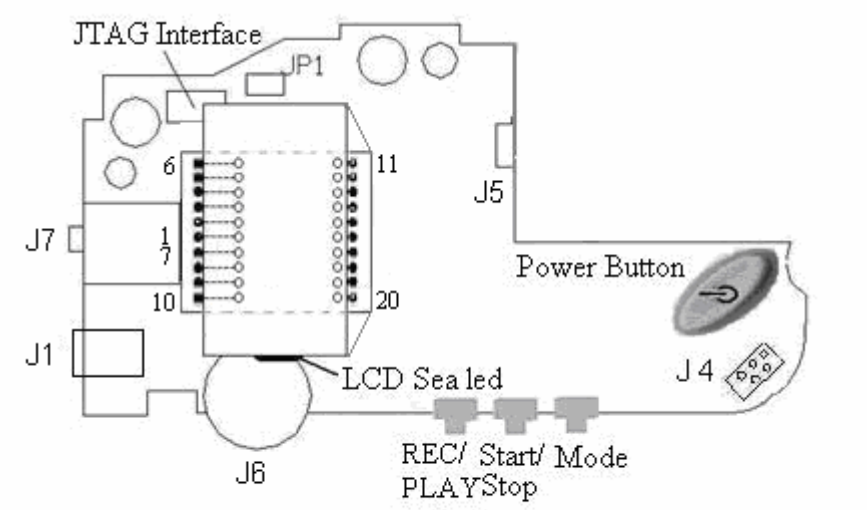
PCB of Basic is shown in Figure 2-4:

Figure 2-4 PCB of SONOTRAX Basic



2.3.2 PCB of SONOTRAX Basic/Basic A/Pro/II/II Pro

Figure 2-5 PCB Outline of SONOTRAX Basic A/Pro/II/II Pro

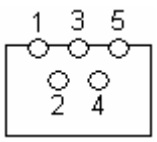


J1 Charge Socket for SONOTRAX II & II Pro
REC/PLAY button for SONOTRAX Pro & II Pro

J1: charge socket.

J6: volume control.

J4: socket for probe mini USB.



1: VCC

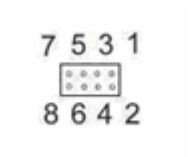
2: Signal

3, 4, 5: Probe identifying code.

J5: socket for connecting with battery.

JP1: socket for speaker.

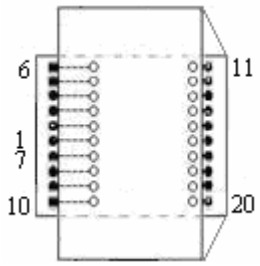
JTAG interface: MCU program solidify interface.



1: TDO	2: TDI
3: TMS	4: TCK
5: GND	6: RST
7: 3.3V	8: NC

J7: earphone socket.

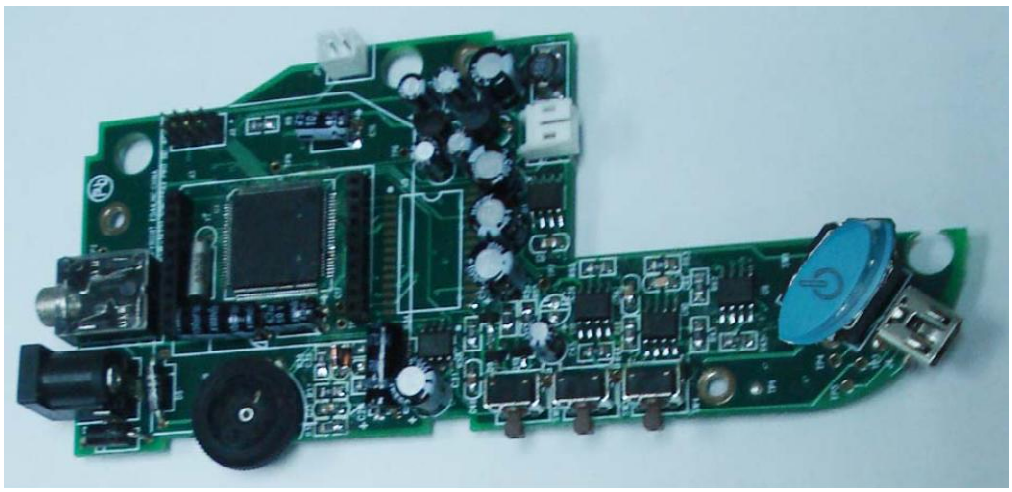
SONOTRAX Basic A/ Pro/ II/ II Pro has a thick LCD with 20 pins:



1~16: Section Code Data
17: GND
18: VCC
19: Backlight Control Pin
20: NC

PCB of II Pro is shown in Figure 2-6:

Figure 2-6 PCB of SONOTRAX II Pro



2.4 Inspection of Function and Performance

2.4.1 Function Inspection

The probe is a polycrystal broad beam ultrasound transducer. Place the probe on the mother's abdomen, it emits ultrasound signal to the fetal heart and receives the echo signal. After being processed and amplified, the fetal heartbeat sound can be heard by ear.

Unit: bpm (beat per minute) times/minute

FHR measurement and display range: 50 ~ 210 (bpm)

Accuracy: ±3 bpm

Monitor the FHR with the following procedure:

1) Install the battery, press the **POWER** button to turn on the Doppler;

2) Feel the fetal heart position with hand, apply some gel on the acoustic surface of the probe and put the probe on the position. Move the probe slowly until clear audio signal is heard.

Thus it can be seen that the probe plays an important role in FHR monitoring, the probe's veracity has a direct bearing on the FHR accuracy. Inspect the probe with the following procedure:

1) Install the battery, press the **POWER** button to turn on the Doppler;
2) Adjust the volume to make the sound be heard clearly;
3) Hold the probe with one hand; knock the acoustic surface gently with a flat-bottom pencil or similar objects. Listen to the sound, change for a new probe if the sound isn't normal.

2.4.2 Performance Inspection

Test the performance of the SONOTRTRAX Basic/ Basic A/ Pro/ II/ II Pro ultrasonic pocket Doppler with a FHR sensitivity tester. If the error between the Doppler LCD display and the tester output frequency does not excess ±3bpm, we consider the Doppler has good performance.

Chapter 3 Service

3.1 Disassemble the Doppler

3.1.1 Remove the Probe

Place the probe in the following steps: (Take example for 2.0MHz waterproof probe.)

1) Hold the main unit with one hand, and hold the top of the probe with another hand (Figure 3-1).
2) Take out the top of the probe (Figure 3-2).
3) Take out the whole probe from the frame (Figure 3-3).
4) Pull out the plug of the probe from its socket (figure 3-4).

Figure 3-1

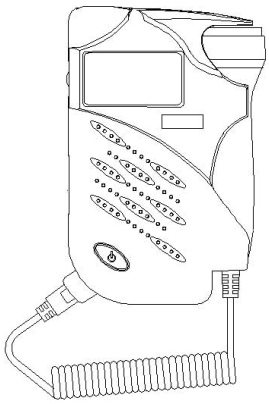


Figure 3-2

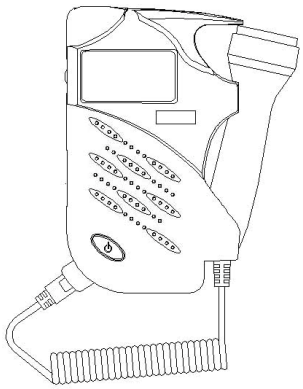


Figure 3-3

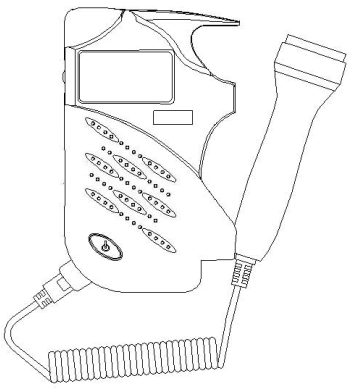
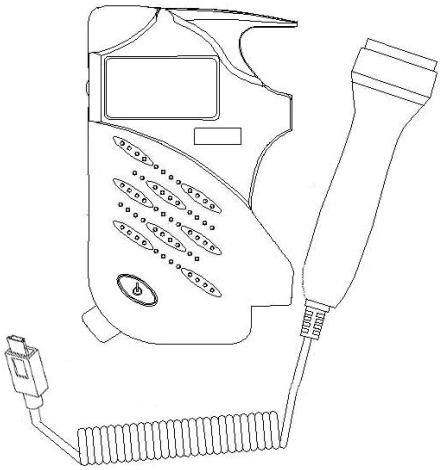


Figure 3-4 Remove the Probe



3.1.2 Remove the Battery

Remove the battery in the following steps:

1) The rear panel is upturned (Figure 3-5);

2) Press down the stripe symbols (that without arrowhead) with one thumb, at the same time slide the battery cover out along the direction of arrowhead with the other thumb (Figure 3-6);

Figure 3-5

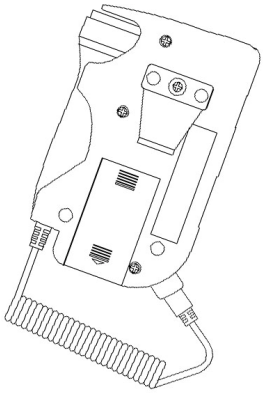
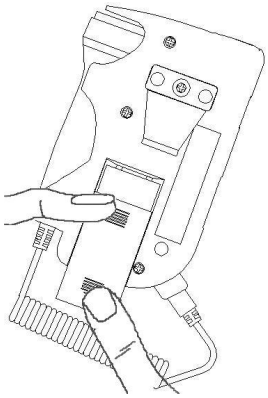


Figure 3-6



3) Take out the battery out from the compartment a little and disconnect the battery from the connector (Figure 3-7);

   For SONOTRAX Basic, SONOTRAX Basic A, SONOTRAX Pro SONOTRAX II and SONOTRAX II Pro Ultrasonic Pocket Doppler, hold the battery connector cables and pull the plug out from the socket inside the case (figure 3-8).

Figure 3-7

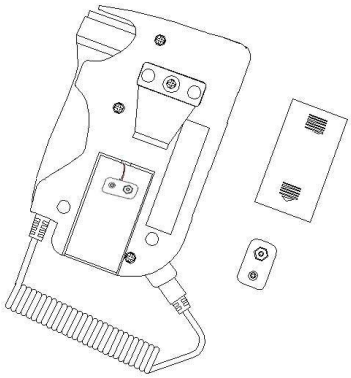
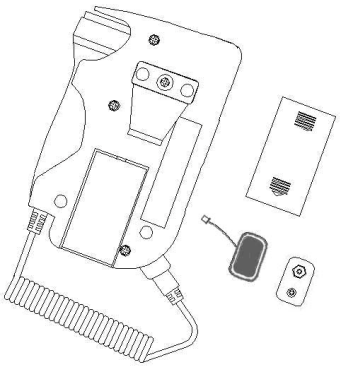


Figure 3-8

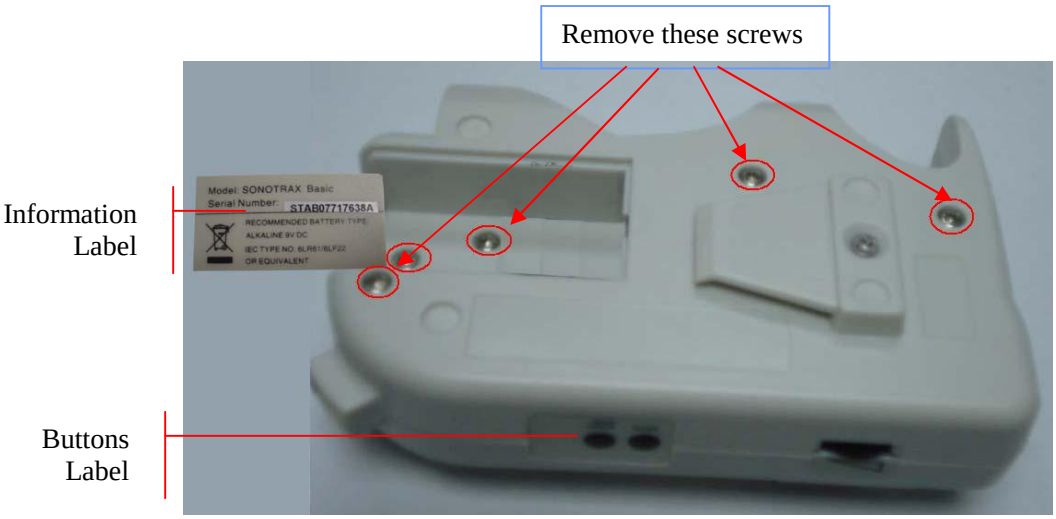


3.1.3 Disassemble the Doppler Main Unit

Take SONOTRAX Basic as an example; disassemble the Doppler main unit in the following steps:

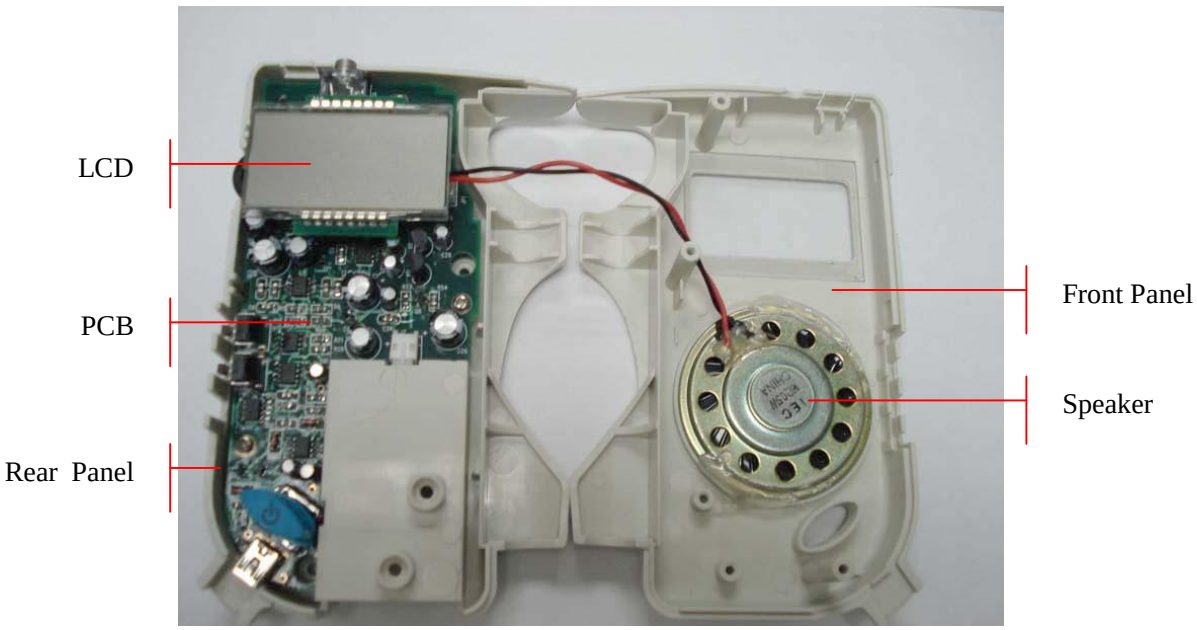
1) Peel the information label in the battery compartment off;
2) Peel the buttons label on left panel off;
3) Remove the five screws as shown in figure 3-9, (no need to remove the screw on the pocket clip attachment.)

Figure 3-9 Labels and screws need to be removed



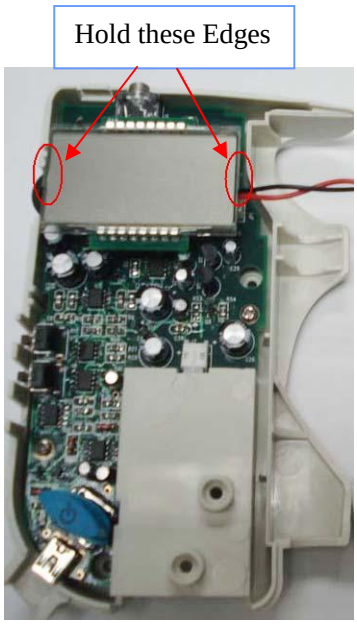
4) Disjoin the case, the Doppler unit consists of five parts: front panel, rear panel, speaker, LCD and PCB.

Figure 3-10 Main Parts of the Unit



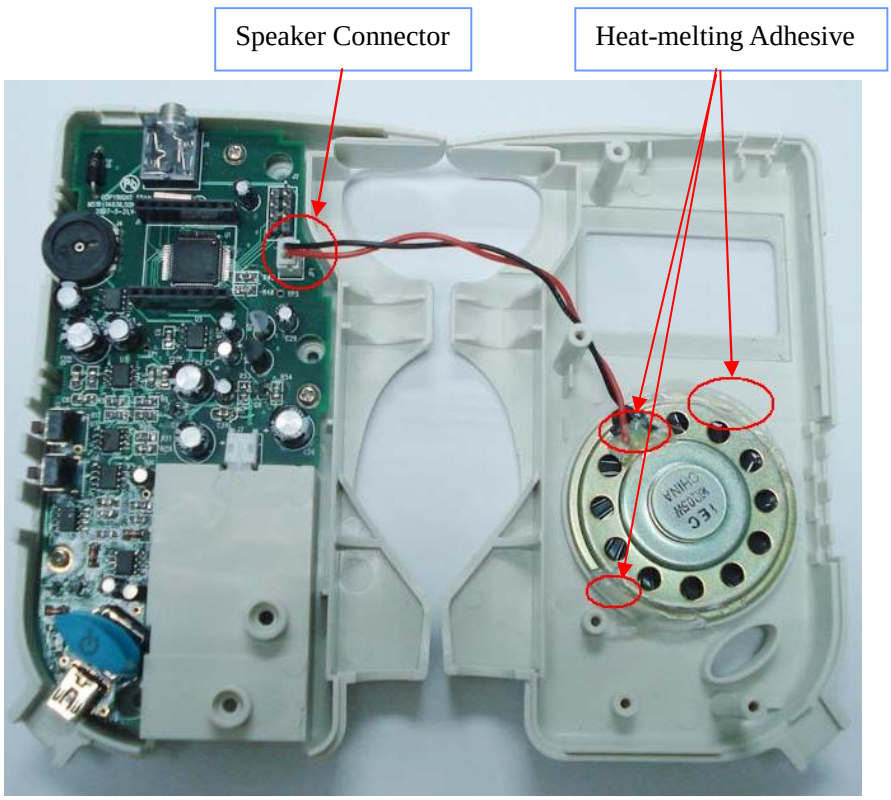
5) Hold the two edges of LCD and unplug it from its socket on the PCB (figure 3-11).

Figure 3-11 Unplugging LCD



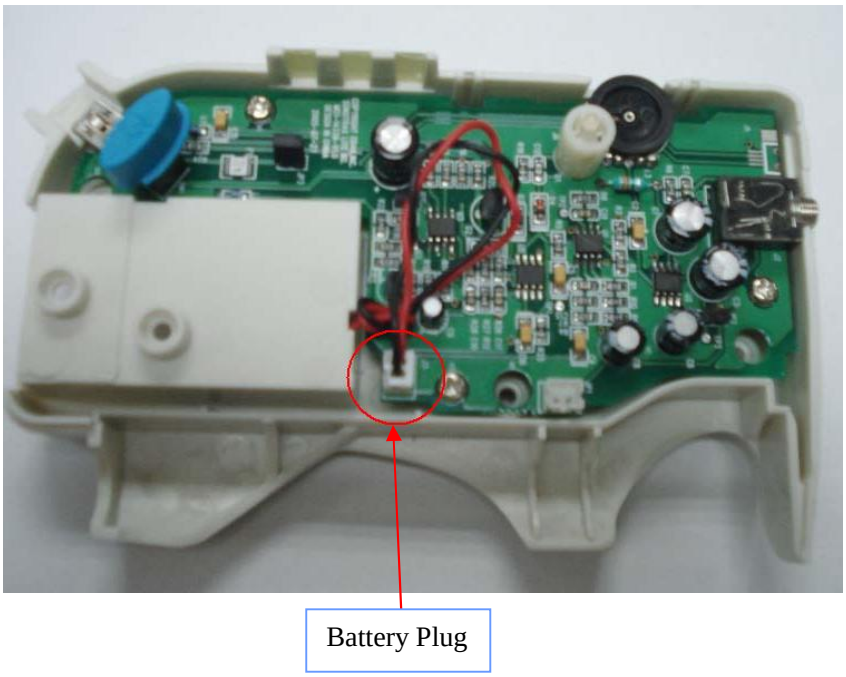
6) Unplug the speaker connector from the socket on the PCB; Apply a few drops of alcohol to the heat-melting adhesive that sticks the speaker to the front panel (figure 3-12), take out the speaker after the glue is melted.

Figure 3-12 Heat-Melting Adhesive on the Speaker and the Speaker Connector



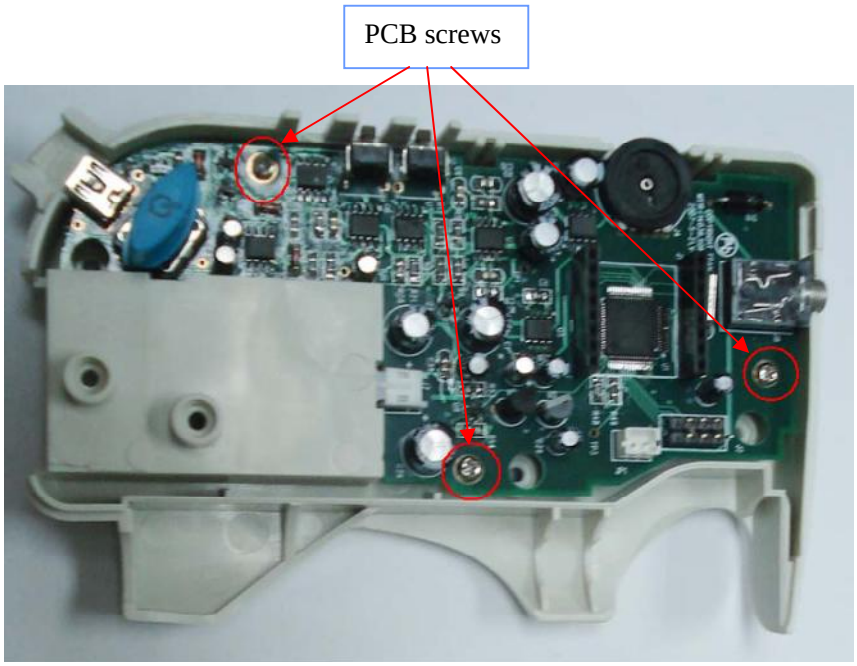
7) Unplug the battery plug of SONOTRAX Lite from its socket on the PCB (figure 3-13).

Figure 3-13 The battery plug of SONOTRAX Lite



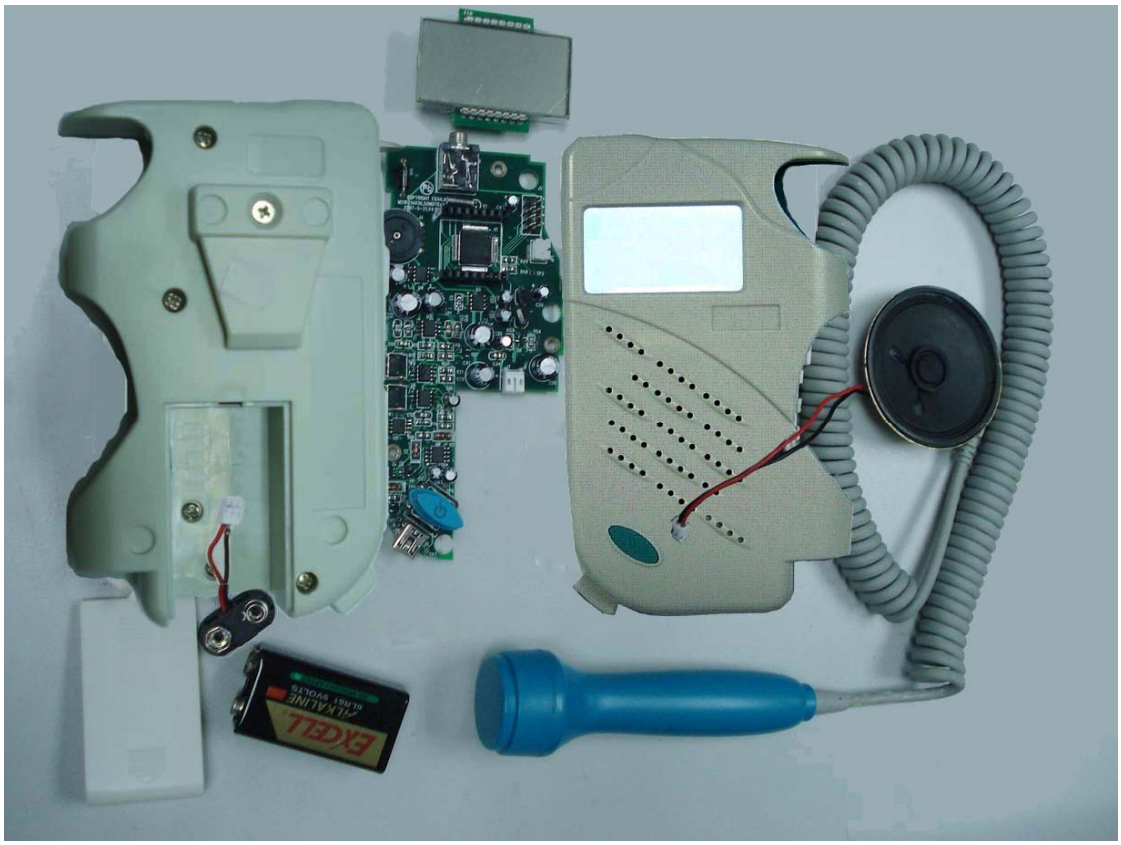
8) Remove the three screws shown in figure 3-14 to take the PCB off from the rear panel.

Figure 3-14 The screws that fix the PCB



Refer to figure 3-15 for the final disassembled parts:

Figure 3-15 Main Parts of the Doppler



3.2 Troubleshooting

3.2.1 Operation failure

Phenomenon	Possible Cause	Solution
None of LED, LCD and speaker works after press the POWER button.	The battery has run down.	Renew or charge the battery.
	The POWER button is damaged.	Renew a POWER button.
	The PCB is damaged.	Renew a PCB.
The volume control doesn't work.	The volume control is damaged.	Renew a volume control.
	The PCB is damaged.	Renew a PCB.
The Doppler can not be shutdown.	The POWER button is damaged.	Renew a POWER button.
	Switch on and shut down the Doppler continuously.	Allow a few seconds intervals between switching on and shut down the Doppler.
	The POWER button is short circuited.	Renew a PCB.

3.2.2 Function Failure

Phenomenon	Possible Cause	Solution
After switched on, the LED/LCD doesn't work while the speaker works.	The LED/LCD is damaged.	Renew the LED/LCD.
	The PCB is damaged.	Renew the PCB.
After switched on, the speaker is soundless while the LED/LCD works.	The speaker is damaged.	Renew the POWER button.
	The volume is turned down.	Turn up the volume.
	The probe is damaged.	Renew a probe.
	The PCB is damaged.	Renew a PCB.
LCD display incorrectly.	The LCD is damaged.	Renew a LCD.
	System error.	Shutdown the Doppler and restart.
	The probe is damaged.	Renew a probe.
	The PCB is damaged.	Renew a PCB.
Sound with noise	Strongly interfered by electromagnetic field.	Avoid using the device in such strong Electromagnetic environment.
	Bad connector of the speaker.	Repair the connector.
	Bad speaker.	Renew a speaker.
No output from earphone.	The earphone socket is damaged.	Renew a socket.
	The PCB is damaged	Renew a PCB.
The LED/LCD is dim, the speaker volume is down.	The battery power is low.	Renew or charge the battery.

3.3 Reassembling the Doppler

3.3.1 Reassemble the Doppler Main Unit

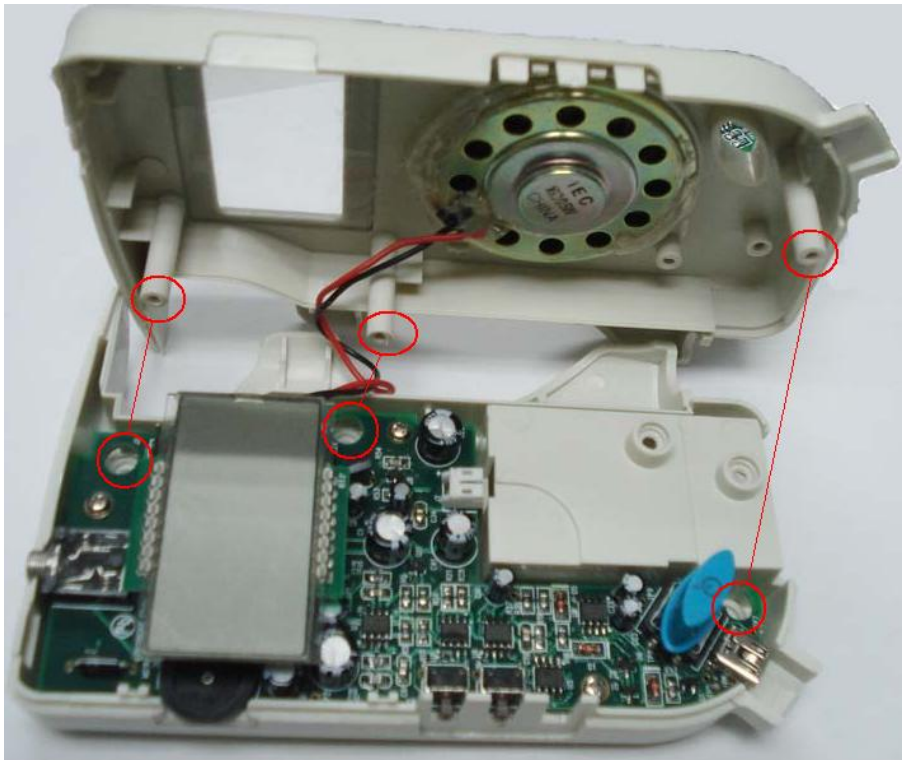
Reassemble the Doppler in the following steps:

1) Fix the PCB to the rear panel with three Ø3x8 screws (figure 3-14);
2) Plug in the battery connector of SONOTRAX Lite to its socket on the PCB (figure 3-13).
3) Apply a few drops of heat-melting adhesive to the edge of the speaker and stick it to the front panel, insert the speaker cable plug into its socket on the PCB (figure 3-12).
4) Hold the LCD on the two edges and plug its connector into the socket on the PCB (figure

3-11).

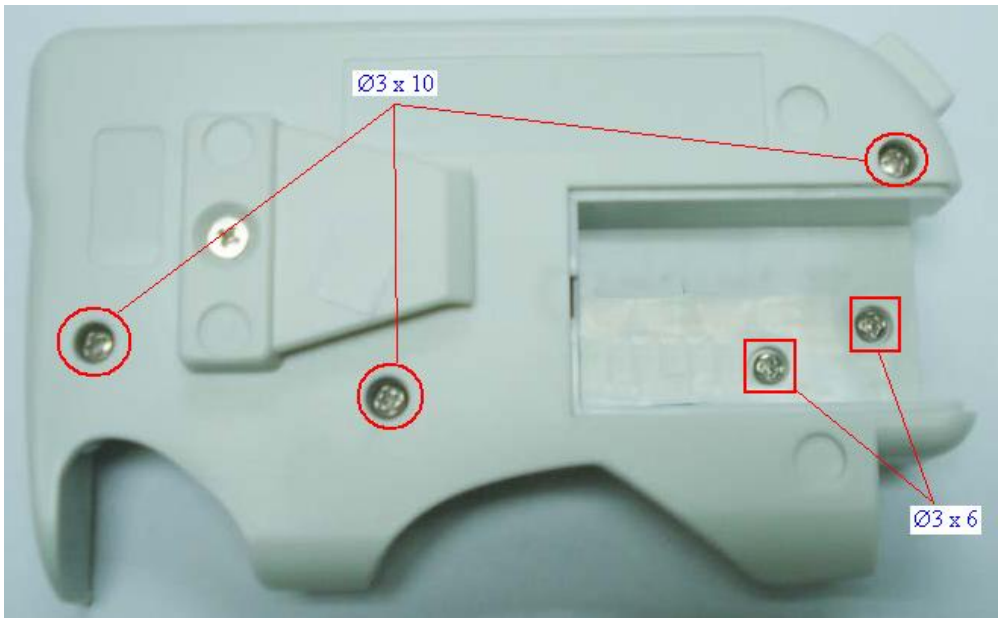
5) Line up the front panel Line three posts of the front panel and their corresponding holes on the rear panel (figure 3-15), join the two panels together tightly.

Figure 3-15 Posts and Holes



6) Fix the case with two Ø3x6 screws and three Ø3x10 screws (figure 3-16).

Figure 3-16 Fixing screws



7) Stick the information label on the bottom of the battery compartment.

8) Stick the buttons label to the left panel.

3.3.2 Install the Battery

Install the battery in the following steps:

1) For SONOTRAX Basic/ Basic A/ Pro/ II/ II Pro, insert the battery cables plug into the socket inside the case.
2) Connect the battery to the battery connector.
3) Put them into the battery compartment with the connector inward.
4) Slide the battery compartment cover in with the direction opposite to the arrow.

3.3.3 Place the Probe

Place the probe in the following steps:

5) Insert the mini USB of the probe into the socket on the main unit.
6) Hold the main unit with one hand and hold the probe with the other hand. First place the afterbody of the probe into the frame (Figure 3-3), then push the top of the probe in (Figure 3-2).

Chapter 4 Maintenance and Ordering Information

4.1 Maintenance

The probe acoustic surface is frangible and must be handled with care.

Gel must be wiped from the probe after use. These precautions will prolong the life of the unit.

The user must check that the equipment does not have visible evidence of damage that may affect personnel's safety or Doppler capability before use. The recommended inspection interval is once per month or less. If damage is evident, replacement is recommended before use.

The equipment should undergo periodic safety testing to insure proper personnel isolation from leakage currents. This should include leakage current measurement. The recommended testing interval is once every two years or as specified in the institution's test and inspection protocol.

The accuracy of FHR is controlled by the equipment and can not be adjusted by user. If the FHR result is distrustful, please use other method such as stethoscope to verify immediately or contact local distributor or manufacturer to get help.

4.2 Cleaning

Before cleaning, switch off the power and take out the batteries.

Keep the exterior surface of the device clean and free of dust and dirt, clean exterior surface (display screen included) of the unit with a dry, soft cloth. If necessary, clean it with a soft cloth soaked in a solution of soap, or water and wipe dry with a clean cloth immediately.

Wipe the probe with soft cloth to remove any remaining coupling gel. Clean with soap and water only.

CAUTION: Don't use strong solvent, for example, acetone.

CAUTION: Never use an abrasive such as steel wool or metal polish.

CAUTION: Do not allow any liquid to enter the product, and do not immerse any part of the device into any liquid.

CAUTION: Avoid pouring liquids on the device while cleaning.

CAUTION: Don't remain any cleaning solution on the surface of the device.

NOTE: Wipe the surface of probe with 70% ethanol or isopropranol alcohol, self-air dry, or clean with a clean, dry cloth.

4.3 Disinfecting

Clean the equipment exterior surface, probe, etc. as above. For the disinfecting of 2.0MHz waterproof probe/ 3.0MHz waterproof probe, immerse the probe into the solutions of Benzalkonium Bromide, 0.5% Chlorhexidine, 2% Glutaraldehyde or 75% ethanol to disinfect. Wipe the probe with a clean, dry cloth to remove any remaining moisture.

NOTE: Please pay attention to the height when the probe is immersed in order to prevent the sterilant from entering the probe socket.

CAUTION : Never try to sterilize the probe or equipment by low temperature steam or other methods.

4.4 Ordering Information

The accessories for normal use supplied or approved by the manufacturer can be used with Ultrasonic Pocket Doppler.

Accessory	**Part Number**
Coupling Gel (0.06litre/0.25litre bottle)	MS2-14019
2.0MHz Waterproof Probe	MS3-14320
3.0MHz Waterproof Probe	MS3-14321
4.0MHz Waterproof Vascular Probe	MS3-14346
8.0MHz Waterproof Vascular Probe	MS3-14347
Alkaline Battery (9V)	M21-64048
Lithium-ion Polymer Battery (900mAh)	Xwoda Electronics Co. Ltd, M21R-64083
Lithium-ion Polymer Battery (500mAh)	HYENERGY, M21R-64084
Lithium-ion Polymer Battery Charger	M21R-64082
Line-in Cable	EDAN, M13-36032
Earphone	M13-36041
Carry Bag	MS1-14268

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